



1. Which of the following statements are true?

- a) A chord divides a circle into two segments.
- b) A chord divides a circle into two sectors.
- c) Atmost one chord can be drawn on a circle with a certain length.
- d) The diameter is the longest chord.
- e) The radius is the shortest chord.

(i) {e,b,a} (ii) {c,d,a} (iii) {b,a} (iv) {a,d} (v) {c,d}

2. Which of the following statements are true?

- a) Equal length chords are equidistant from the centre of the circle.
- b) Equal length chords subtend equal angles at the centre of the circle.
- c) No two chords bisect each other.
- d) The longest chord of the circle passes through the centre of the circle.
- e) The farther the chord is from the centre, the larger the angle it subtends at the centre.

(i) {c,a} (ii) {c,a,b} (iii) {c,e,d} (iv) {a,b,d} (v) {e,b}

3. Which of the following statements are true?

- a) The area enclosed by a chord and its minor arc is called minor segment.
- b) A sector is the area enclosed by two radii and a chord.
- c) The area enclosed by a chord and its major arc is called major segment.
- d) A circle divides the plane on which it lies into three parts.
- e) The diameter divides the circle into two unequal parts.

(i) {e,c} (ii) {b,a,c} (iii) {a,c,d} (iv) {b,a} (v) {b,e,d}

4. Which of the following statements are true?

- a) The midpoint of any diameter of a circle is its centre.
- b) A sector is the area enclosed by two radii and a chord.
- c) The longest of all chords of a circle is called diameter.
- d) The diameter divides the circle into two unequal parts.
- e) Two chords bisect each other.

(i) {a,c} (ii) {e,b,a} (iii) {d,c,a} (iv) {b,a} (v) {d,c}

5. Which of the following statements are true?

- a) If a kite is cyclic, it is a square.
- b) If a rhombus is cyclic, it is a square.
- c) A cyclic quadrilateral is a regular polygon.
- d) If a parallelogram is cyclic, it is a rectangle.
- e) If a trapezium is cyclic, it is a rectangle.

(i) {b,d} (ii) {e,a,b} (iii) {c,d} (iv) {c,d,b} (v) {a,b}

6. Which of the following statements are true?

- a) Only one circle can be drawn with a centre.
- b) Only one circle can be drawn passing through two points.
- c) Exactly two tangents can be drawn parallel to a secant.
- d) Infinite circles can be drawn passing through three collinear points.
- e) Atmost one circle can be drawn passing through three non-collinear points.

(i) {b,e} (ii) {b,e,c} (iii) {d,a,c} (iv) {c,e} (v) {a,c}

7. Which of the following are cyclic quadrilaterals?

- a) triangle
- b) trapezium
- c) parallelogram
- d) rectangle
- e) square
- f) rhombus

(i) {b,e} (ii) {a,e,d} (iii) {c,f,d} (iv) {a,d} (v) {d,e}

8. Which of the following statements are true?

- a) Atmost three common tangents can be drawn touching two circles which touch each other.
- b) A maximum of four common tangents can be drawn touching any two circles.
- c) Atmost two common tangents can be drawn touching any two circles.
- d) Atmost one common tangent can be drawn for any two concentric circles.

(i) {c,b,a} (ii) {c,d,a} (iii) {d,b} (iv) {c,a} (v) {a,b}

9. Which of the following statements are true?

- a) A tangent is the limiting case of a secant.
- b) A secant has two end points.
- c) A diameter is a limiting case of a chord.
- d) A secant and a chord are same.
- e) A radius is a limiting case of a diameter.

(i) {b,a} (ii) {a,c} (iii) {e,b,a} (iv) {d,c,a} (v) {d,c}

10. Which of the following statements are true?

- a) Only two tangents can be drawn from a point outside the circle.
- b) Atmost one tangent can be drawn through a point inside the circle.
- c) Only one tangent can be drawn through a point on a circle.
- d) Two tangents to a circle always intersect.
- e) The sides of a triangle can be tangents to a circle.

(i) {a,c,e} (ii) {b,a,c} (iii) {d,c} (iv) {b,d,e} (v) {b,a}

11. Which of the following statements are true?

- a) A line parallel to a tangent is a secant.
- b) If two tangents are parallel, the distance between them is equal to the diameter of the circle.
- c) Two different tangents can meet at a point on the circle.
- d) If two tangents are perpendicular, they form a right angled triangle with their points of contact with the circle and their point of intersection.
- e) If two tangents to a circle intersect, their points of contact with the circle together with their point of intersection form an isosceles triangle.

(i) {a,c,e} (ii) {a,b,d} (iii) {b,d,e} (iv) {c,d} (v) {a,b}

12. Which of the following statements are true?

- a) There exists four common tangents for any two non-intersecting circles.
- b) If two circles touch each other externally, there is only one common tangent.
- c) If two circles touch each other internally, there is only one common tangent.
- d) If two circles intersect, then two common tangents can be drawn.

(i) {b,a} (ii) {b,c} (iii) {b,d} (iv) {a,c,d} (v) {b,a,c}

13. Which of the following statements are true?

- a) If two circles touch externally, the distance between their centres is the sum of their radii.
- b) If two circles touch internally, the square of the distance between their centres is the difference of the squares of their radii.
- c) If two circles touch externally, their centres and the point of contact form an isosceles triangle.
- d) If two circles touch externally, the square of the distance between their centres is the sum of the squares of their radii.
- e) If two circles touch internally, their centres and the point of contact form a scalene triangle.
- f) If two circles touch internally, the distance between their centres is the difference of their radii.

(i) {c,f} (ii) {a,f} (iii) {b,f,a} (iv) {b,a} (v) {d,e,a}

14. Which of the following statements are true?

- a) If a circle can be inscribed in a quadrilateral, the sum of the lengths of a pair of opposite sides is equal to the other pair.
- b) If a circle can be inscribed in a quadrilateral, then it must be a square.
- c) It is always possible to inscribe a circle in a quadrilateral.
- d) It is always possible to inscribe a circle in a regular polygon.
- e) If a circle can be inscribed in a quadrilateral, it must be a kite.

(i) {c,d,a} (ii) {c,d} (iii) {a,d} (iv) {e,b,a} (v) {b,a}

15. Which of the following statements are true?

- a) Angles in the same segment are equal.
- b) Angles in the opposite segments are supplementary.
- c) Angles in the opposite segments are complementary.
- d) Angles subtended by equal length arcs in two circles are equal.

(i) {a,b} (ii) {c,b,a} (iii) {d,b} (iv) {c,d,a} (v) {c,a}

16. The angle subtended by the semicircle at the centre is

(i) 190° (ii) 195° (iii) 185° (iv) 210° (v) 180°

17. The angle subtended by the diameter at any point on the circle is

- (i) 120° (ii) 105° (iii) 100° (iv) 95° (v) 90°

18. The opposite angles in a cyclic quadrilateral are

- (i) equal (ii) linear pair (iii) complementary (iv) supplementary

19. If the radius of the circumcircle is half the length of a side of the triangle, then the triangle is

- (i) equilateral triangle (ii) obtuse angled triangle (iii) acute angled triangle (iv) right angle triangle

20. Circles having common centre are called

- (i) congruent circles (ii) intersecting circles (iii) similar circles (iv) concentric circles

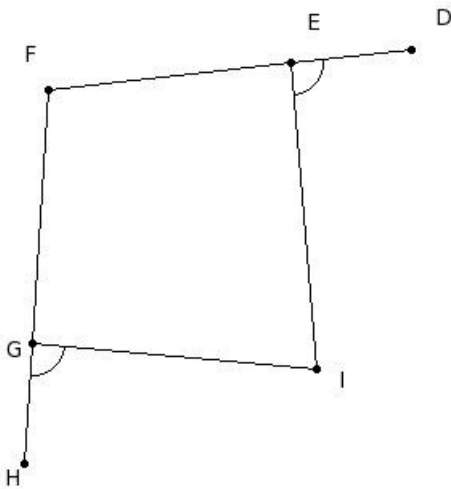
21. If two circles are concentric, then

- (i) their diameters are same (ii) their perimeters are same (iii) their radii are same
(iv) their centres are same

22. With the vertices of a triangle $\triangle HJL$ as centres, three circles are drawn touching each other externally. If the sides of the triangle are 11 cm, 17 cm and 14 cm, find the radii of the circles

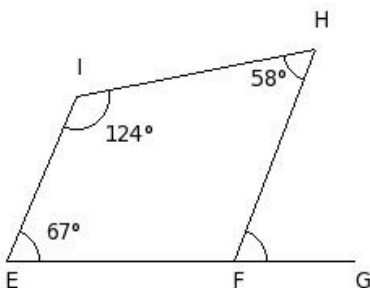
- (i) 9 cm, 12 cm & 15 cm respectively (ii) 9 cm, 7 cm & 10 cm respectively
(iii) 4 cm, 7 cm & 15 cm respectively (iv) 4 cm, 12 cm & 10 cm respectively
(v) 4 cm, 7 cm & 10 cm respectively

23. In the given figure, EFGI is a cyclic quadrilateral where FG and FE are produced to H and D respectively. If $\angle DEI = 92^\circ$, find $\angle HGI$



- (i) 98° (ii) 118° (iii) 93° (iv) 103° (v) 88°

24. In the given figure, $\angle E = 67^\circ$, $\angle H = 58^\circ$ and $\angle I = 124^\circ$, find $\angle HFG$



- (i) 99° (ii) 69° (iii) 74° (iv) 84° (v) 79°

25. Which of the following statements are true?

- a) A cyclic parallelogram is a rectangle.
- b) A cyclic kite is a square.
- c) A cyclic rhombus is a square.
- d) A cyclic trapezium is a rectangle.
- e) A cyclic parallelogram is a rhombus.

(i) {d,c} (ii) {b,a} (iii) {e,b,a} (iv) {a,c} (v) {d,c,a}

26. Which of the following statements are true?

- a) Either pair of opposite angles of a cyclic quadrilateral are supplementary.
- b) A quadrilateral in which the diagonals are equal and bisect each other is cyclic.
- c) An isosceles trapezium is cyclic.
- d) The exterior angle of a quadrilateral and its interior opposite angle are supplementary.
- e) All parallelograms are cyclic.

(i) {a,b,c} (ii) {d,a,b} (iii) {d,a} (iv) {d,e,c} (v) {e,b}

27. Which of the following are not cyclic quadrilaterals?

- a) rhombus
- b) kite
- c) square
- d) isosceles trapezium
- e) rectangle

(i) {e,c,a} (ii) {a,b} (iii) {c,a} (iv) {d,b,a} (v) {d,b}

28. In triangle GHI, if a circle is drawn with HI as diameter and if it passes through G it is a

(i) right angle triangle (ii) equilateral triangle (iii) obtuse angled triangle (iv) acute angled triangle

29. Which of the following statements are true?

- a) π is a rational number.
- b) All diameters of a circle are chords.
- c) All chords of a circle are diameters.
- d) A circle divides the plane into three mutually disjoint sets of points.
- e) $\frac{22}{7}$ is a rational number.

(i) {a,c,e} (ii) {a,b} (iii) {b,d,e} (iv) {c,d} (v) {a,b,d}

30. If EFGH is a cyclic quadrilateral and $\angle E - \angle G = 94^\circ$, then $\angle G$

(i) 53° (ii) 48° (iii) 58° (iv) 73° (v) 43°

31. If FGHI is a cyclic parallelogram, then $\angle I$

(i) 120° (ii) 95° (iii) 100° (iv) 90° (v) 105°

32. Points which lie on the circumference of the circle are called

(i) Similar points (ii) Cyclic points (iii) Coincident points (iv) Concurrent points (v) Concyclic points

33. Two concentric circles are of radii 23 cm and 14 cm. Find the length of the chord of the outer circle that touches the inner circle

(i) 36.50 cm (ii) 34.50 cm (iii) 38.50 cm (iv) 35.50 cm (v) 37.50 cm

Assignment Key

1) (iv)	2) (iv)	3) (iii)	4) (i)	5) (i)	6) (iv)
7) (v)	8) (v)	9) (ii)	10) (i)	11) (iii)	12) (iv)
13) (ii)	14) (iii)	15) (i)	16) (v)	17) (v)	18) (iv)
19) (iv)	20) (iv)	21) (iv)	22) (v)	23) (v)	24) (ii)
25) (iv)	26) (i)	27) (ii)	28) (i)	29) (iii)	30) (v)
31) (iv)	32) (v)	33) (i)			